ABSTRACT OF THE DISCLOSURE

It is an object to provide, with a high productivity, a dielectric thin film having a high degree of pore and a very great mechanical strength, and there are included a surfactant film forming step of forming a film including a surfactant on a surface of a substrate on which a thin film is to be formed, a vapor deposition step of causing the substrate to come in contact with a gas phase containing a silica derivative to form a thin film including the silica derivative, and a step of calcining the substrate having the thin film formed thereon and decomposing and removing the surfactant, the thin film being thus formed.